OTT HydroMet

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21 June 2019

Federal Communications Commission
Washington, DC 20554

Comments to NPRM Docket No. 19-116

Re: Allocation and Service Rules for the 1675-1680 MHz Band; WT Docket No. 19-116

I am submitting these comments as the Director of R&D at OTT Hydromet Corp-Sterling in response to to the Notice of Proposed Rulemaking for the 1675 to 1680 MHz band. We wish to express our concern over the proposal to reallocate the 1675 to 1680 MHz band to a co-primary basis sharing it with non-federal fixed or mobile services and strongly recommend the FCC to reconsider and reject this Notice for Proposed Rulemaking.

OTT Hydromet Corp is a provider of GOES GRB imagery and DCS environmental data systems to federal, state and local governments in addition to private users. These retransmitted products from the operational GOES satellite network provide critical real time data that drive the following systems:

- GRB data:
  This data serves as the backbone of real time civil aviation critical flight warning systems. These systems are used with up to 8 major airline Flight Planning and Routing Systems within the US with direct impact to approximately 15 airlines worldwide and are invaluable to maintaining efficient utilization of resources. On any given day in the US, there are approximately 87,000 flights needing near real time satellite data to help navigate planes around sudden meteorological events.

- DCS/HRIT data:
  This data is the source for multiple emergency flood warning and monitoring systems. Many of the systems provide flood warning services for both coastal and inland waterways along with fire and drought management forecasting all being driven by the GOES DCS system.

We have concerns over the future reliability of operations of GRB, DCS and HRIT systems based on this NPRM proposal. Particularly concerning are the proposed base station transmitter power levels (paragraph 45), out-of-band emission limits (paragraph 47) coupled with unlimited antenna height (paragraph 51). Clearly the DCS, being within the proposed band, will be directly impacted and most likely rendered inoperable. There is concern that the adjacent band for GRB will also be impacted given the proximity to the reallocated 1675-1680 MHz band. We also want to note the following:

- The 'NOAA Spectrum study' should be completed to understand the nature of the interference and impact to current operations. Decisions cannot be properly made until details of how the system will be impacted are known. Until this report is complete, the NPRM should be delayed pending results.

- If an alternate Content Data Network (CDN) is to be the method of data distribution under the assumption that the Rebroadcast products are no longer usable due to interference, we question the uptime availability of this CDN network when significant storms or hurricanes occur. A CDN may have

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a high availability in good weather and located inland, however, in coastal locations and during significant storms, the network may go down for extended periods of time. In addition to major event outages, any slightly reduced throughput of the CDN system due to DNS/security attacks or other latency issues would render the Airline flight planning and routing systems inoperable. They require roughly 264 Mbit/s net throughput and the GOES GRB satellite feed is currently the best choice for a secure and reliable method to received data. Similar impacts would be observed for DCS flood warning systems.

In the list of Federal stations in paragraph 8, the following federal location is omitted:

- International Boundary Water Commission El Paso, TX

Regarding Paragraph 19, here is a list of non-federal stations using the DCS (along with HRIT in some cases). The majority are used for weather forecasting and or flood warning:

- Sacramento, CA; Portland, OR; Big Hill, CA; Rosemead, CA; Huntsville, AL; Austin, TX; Charlotte, NC; Burlington, VT; Albuquerque, NM; Concord, NH; St. Petersburg, FL; Mayaguez, PR; Honolulu, HI

This is a list of locations running GRB ingest for civil aviation applications:

- Denver, CO; Round Rock, TX

Thank you for the opportunity to comment on the Notice of Proposed Rulemaking and please feel free to contact us for further information or discussion on this issue.

Regards,

J. Christopher Buchner

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